

In the claims:

Please cancel claims 4-18, 21, and 22.

Please insert the following new claims 23-44:

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23. A pressure sensor comprising:
a housing which includes a metal base and walls which are formed from a polymer material, the metal base and walls defining a chamber having a vent hole;
multiple leads extending into the chamber through the walls; and
a pressure transducer disposed in the chamber upon the metal base and electrically connected to at least one of the leads within the chamber;
wherein the vent hole allows the pressure transducer to be in communication with the pressure of the atmosphere outside the housing, and
wherein the metal base upon which the pressure transducer is disposed forms a portion of one of said multiple leads extending into the chamber through the walls.

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~~24. The pressure sensor of claim 23,
wherein the base portion of the metal lead upon which the pressure transducer is mounted is a ground lead.~~

25. The pressure sensor of claim 23,
wherein the chamber walls define a shelf region internal to the chamber in which portions of the multiple leads are partially embedded and are partially exposed within the chamber; and
further including,
at least one wire bond that electrically connects the pressure transducer and an exposed portion of at least one of the leads.

26. The pressure sensor of claim 23, wherein the chamber is filled with a pressure transfer medium.

27. The pressure sensor of claim 26 further including at least one wire bond that electrically connects the pressure transducer and an exposed portion of at least one of the leads.

28. The pressure sensor of claim 27 wherein the walls extend about the base so as to leave exposed only a portion of the base interior to the chamber.

29. The pressure sensor of claim 28, wherein the base portion of the metal lead upon which the pressure transducer is mounted is a ground lead.

30. The pressure sensor of claim 29, wherein the chamber walls define a shelf region internal to the chamber in which portions of the multiple leads are partially embedded and are partially exposed within the chamber.

31. The pressure sensor of claim 23 wherein the chamber is filled with a silicone gel which serves as a pressure transfer medium.

32. The pressure sensor of claim 23 wherein the walls extend about the base so as to leave exposed only a portion of the base interior to the chamber.

33. The pressure sensor of claim 23 wherein the walls extend about the base so as to leave exposed portions of the base interior to the chamber and portions of the base exterior to the chamber.

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34. A pressure sensor produced by the method comprising:
providing a metal lead frame with multiple leads;
downsetting at least a portion of one of the leads relative to other leads in a lead frame;

molding a polymer housing around the lead frame so as to produce walls that define a chamber having a transducer installation opening and through which walls the multiple leads extend and in which the downset portion is exposed inside the chamber so as to provide a metal base opposite the installation opening;

installing a pressure transducer in the housing by passing the transducer through the installation opening and securing the transducer to the base inside the chamber;

wire bonding at least one of the leads to the pressure transducer;

providing a pressure transfer medium within the chamber; and

securing a cap over the installation opening while providing a vent hole into the chamber.

35. The pressure sensor of claim 34, wherein the step of wire bonding includes:

heating the lead having the downset portion that serves as the base in order to heat the pressure transducer disposed thereon.

36. A pressure transducer housing comprising:

a metal base;

walls which are formed from a polymer material and which extend about the metal base and which define an opening opposite the metal base to allow access for installing a pressure transducer onto the metal base, wherein said opening allows communication of pressure from the atmosphere surrounding the pressure transducer housing with the metal base on which the pressure transducer is to be installed; and

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multiple leads extending through the walls;

wherein the metal base upon which the pressure transducer is to be installed forms a portion of one of said multiple leads extending into the chamber through the walls, and

wherein the metal base has a first face upon which the pressure transducer is to be installed and a second face opposite the face upon which the pressure transducer is to be installed, and said second face is in contact with the atmosphere surrounding the pressure transducer housing.

37. The housing of claim 36 further comprising:

a cap that fits over the opening and a vent hole which allows communication of pressure from the atmosphere surrounding the pressure transducer housing with the metal base on which the pressure transducer is to be mounted.

38. The housing of claim 36 further comprising:

a cap that defines a vent hole and that fits over the opening.

39. The housing of claim 36 wherein the walls extend about the metal base so as to leave exposed only a portion of the base opposite the opening.

40. The housing of claim 36 wherein the base is formed from a downset lead extending through one of the walls.

41. The housing of claim 36 wherein the walls define a shelf region internal to the housing and opposite the opening in which portions of the multiple leads are partially embedded and are partially exposed opposite the opening.

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42. The housing of claim 40, wherein the walls define a shelf region internal to the housing and opposite the opening in which portions of the multiple leads are partially embedded and are partially exposed opposite the opening.

43. The housing of claim 42, wherein the walls extend about the base so as to leave exposed only a portion of the base interior to the chamber.

44. The housing of claim 43, wherein the metal base upon which the pressure transducer is to be mounted is a ground lead.

REMARKS

Claims 4-18, 21, and 22 have been canceled, and new claims 23-44 have been entered by this Preliminary Amendment. The amendments to the specification are made to correct obvious typographical errors. The amendments to the claims find support at, inter alia, p. 3 line 22 - p. 4 line 5 of Applicant's specification.

In the Office Action mailed April 10, 1997, the Examiner rejected claims 4-11 and 21-22 under 35 U.S.C. Sec. 112, second para., as being indefinite. These claims have been canceled and replaced with new claims 23-44. Cancellation of claims 4-11 and 21-22 renders this rejection moot; however, the new claims have been drafted to address the indefiniteness issues raised by the Examiner in the Office Action dated Apr. 10, 1997

In the Office Action mailed April 10, 1997, the Examiner also rejected claims 4-18 and 21-22 under 35 U.S.C. Sec. 103(a) as being unpatentable over Luetngen et al. (U.S. Pat. No. 4,850,227). The Examiner stated that

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